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## When surgical instruments are left behind - in patients

In the Phila. area, about 80 mistakes are made a year.

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A medical team left behind an unwanted memento in Donald Gable's chest during his successful heart care:

A two-foot-long guide wire.

For six weeks, Gable, a Bala Cynwyd travel agent, walked around unaware of the wire he carried inside. An X-ray showed it extending from his groin to his upper chest.

"I was flabbergasted," said Gable, who developed a blood clot and had to be hospitalized again after the wire was removed. "That thing could have penetrated my vein, and I could have bled to death."

About 80 times a year in the Philadelphia region, the tools of surgery - gauze, scalpels, needles, retractors and the like - are found left behind in patients.

This mistake occurs about once in every 3,800 surgeries in Southeastern Pennsylvania, an Inquirer analysis of hospital billing data has found.

The problem has changed little in recent years, occurring on average about once a year per hospital. No one has come up with a regional estimate until now.

Even a few such cases are serious because they can cause infections and perforations and lead to stinging court verdicts.

A northern New Jersey woman who developed a hernia and severe scarring from gauze left in for six months won a verdict of \$5.8 million in 1996.

"It's not a question of whether you lose but how much you lose," said Peter Leone, a former Princeton Insurance Co. vice president now with the malpractice insurance start-up, NJ Pure. Even when there is little harm, he said, the cost to a hospital can be \$50,000 to \$150,000.

These mistakes can go undetected for years if they cause no problems. Sometimes, they are found by accident.

A Seattle cancer patient did not learn the reason for the searing pain in his stomach until he set off a metal detector at the local airport in mid-2001. The cause for alarm? A 13-inch metal instrument left inside his abdomen at the University of Washington Medical Center.

A Canadian woman set off an airport metal detector in 2002 because of a similar, ruler-length instrument left inside her abdomen.

"There is absolutely no reason for these to occur," said Philadelphia lawyer Paul Lauricella, who won a \$2.5 million verdict in a foreign-body case against Frankford Hospital in 1999. A 15-inch-square towel had been left in his client's abdomen for three weeks.

"All you have to do [to prevent them] is be able to count."

Surgical teams try hard to see that their life-saving tools are safely removed. The main protection comes from new variations of a venerable practice: Two nurses count each item at key points during an operation.

Gauze pads that sop up blood - the most common items left behind - have been tagged with a special strip since the mid-1950s, making them stand out on X-rays. Several area surgeons said they call for such X-rays when counts do not add up.

But the system is far from fool-proof. Chunliu Zhan, a physician and researcher for the federal Agency for Healthcare Research and Quality, found that this mistake occurs 2,700 times a year in the United States - a rate that closely tracks the Philadelphia region's.

Zhan found that a foreign body added four days to the average hospital stay and led to \$36 million a year in added charges. More troubling, he said, about 57 people died from this mistake in 2000, the year he analyzed.

Even hospitals with strong patient-safety efforts face persistent suits involving foreign bodies.

Abington Memorial Hospital has won several national awards for its safety efforts. Yet last year, an appeals court upheld a \$1.5 million jury verdict against Abington for gauze left inside a 67-year-old Philadelphia woman after a hysterectomy. The hospital has called the verdict unreasonably large and is continuing to appeal.

Robert Wood Johnson University Hospital, an eminent teaching facility in New Brunswick, N.J., is being sued for leaving behind a 21-inch guide wire in a patient after a life-saving procedure. After the wire went undetected for 61 days, the patient developed an infection and died.

And the Hospital of the University of Pennsylvania (HUP), whose system ranks second nationally in federal research grants, faces a suit from a New Jersey man who says doctors left in gauze for 14 months after removing part of his colon.

Both Robert Wood Johnson and HUP declined to comment about the cases.

Larry R. Kaiser, chief of surgery at HUP, said the hospital is debating whether to X-ray every patient at the end of surgery.

"Just because an event happens rarely doesn't make it any less important," he said.

But he acknowledged that routine X-rays would raise costs and operating times and still might not solve the problem.

Daniel Dempsey, chairman of surgery at Temple University Hospital, agreed, adding that X-rays "could decrease the emphasis on counting and cause the surgical team to be less vigilant."

While medical experts have been trying to do away with this error for decades, regulators have been slow to collect cases and study them. New Jersey health authorities say they lack a comprehensive system to track medical errors and identify trends involving foreign bodies. Pennsylvania hopes to start such a system within the next year under its new patient safety authority.

The main national group that assures hospitals' quality - the Joint Commission on Accreditation of Healthcare Organizations - also does not specifically collect information on foreign-body cases.

"Would it have been better to include that type of event? Yeah," said Richard J. Croteau, executive director for strategic initiatives. "We'll consider expanding our definition to include that."

The National Quality Forum, a Washington nonprofit whose directors represent all areas of health care, lists foreign bodies as one of 27 "never" events - ones that everyone agrees should never occur in health care.

"Obviously [a foreign body case] does happen, and it's going to continue until there is a concerted effort to report and publicly acknowledge and systematically try to prevent it," said Kenneth W. Kizer, the forum's executive director.

Kizer, among others, is concerned about the sheer number of tools in modern operations. From 200 to 500 items can be involved in a surgery.

"When you have hundreds of different elements, maybe we need to rethink the whole thing," Kizer suggested. "That's exactly the dialogue that needs to occur."

Much that is known about foreign bodies was summarized last year in the New England Journal of Medicine. Harvard researcher Atul A. Gawande and his colleagues found that patients faced the greatest risk when they underwent emergency surgery, such as for the bursting of a major blood vessel or a hysterectomy with uncontrolled bleeding. The authors suggest a simple explanation: Surgical teams often lacked the time to count as carefully in those cases.

Unplanned changes in surgery also raised patients' risk. So did obesity. Extra girth affords more space for items to hide, the authors suggested.

More than half of items were left in the abdomen and pelvis, followed by the vagina and the neck.

Gauze pads - "sponges" in medical lingo - were left behind twice as often as surgical instruments. Gauze can trap fluid and lead to infections, while instruments can puncture an organ. Nearly all require a second operation to be removed.

Gawande is testing several new technologies to further reduce these mistakes. One fledgling effort uses radio frequencies that would track items the way the E-ZPass system logs in cars. "It has to be extra accurate," Gawande said. "The toll booth can miss one car in a thousand, but we can't."

Gable, the Bala Cynwyd travel agent, has sued Thomas Jefferson University Hospital over his guide wire and the blood clot he says it caused. He grew frustrated because no one could explain how the wire was left inside him.

In 2000, Gable received a cardiac catheterization, which uses a guide wire to help evaluate blood flow, then underwent a quadruple bypass to reverse the blockage that doctors found.

A hospital spokeswoman acknowledged that its team left in the wire, but said there was no evidence that it had injured Gable. A clot is a known complication of the bypass surgery that Gable received, she said.

Doctors reviewed the X-rays at least six times before his discharge and did not spot the wire, according to Gable's suit. A doctor discovered the wire when Gable returned for a routine follow-up.

Gable spent an additional seven days in the hospital after the wire's removal. He developed a blood clot in his leg near where the guide wire was inserted, and had to take a blood thinner for six months.

Now 57, the travel agent cannot fly because of the possibility of blood clots. He worries that he will end up like his father, who died at age 40 from a clot in his leg.

Gable maintains that he bears no grudge against Jefferson and said he would return there for care. But he wants a full accounting of what happened.